

CLAIMS

What is claimed is:

- 5 1. A composition comprising, as pre-mixture ingredients,
 - (i) at least one free radical curable component;
 - (ii) at least one cationically curable component;
 - (iii) at least one free radical photoinitiator selected from the group consisting of benzophenones; and
 - 10 (iv) at least one other free radical photoinitiator not selected from the group consisting of benzophenones.
2. The composition according to claim 1, wherein said at least one photoinitiator is benzophenone.
- 15 3. The composition according to any one of claims 1-2, wherein said at least one other photoinitiator is 1-hydroxycyclohexyl phenyl ketone.
- 20 4. The composition according to any one of claims 1-3, wherein the weight ratio of said at least one photoinitiator to said at least one other photoinitiator is less than 0.50.
5. The composition according to any one of claims 1-3, wherein the weight ratio of said at least one photoinitiator to said at least one other photoinitiator is less than 0.05.
- 25 6. The composition according to any one of claims 1-5, wherein the weight ratio of said at least one photoinitiator to said at least one other photoinitiator is at least 0.01.
7. The composition according to any one of claims 1-6, wherein said at least one cationically curable component includes a cycloaliphatic diepoxide.

8. The composition according to any one of claims 1-7, wherein said at least one cationically curable component includes an oxetane compound.

9. The composition according to any one of claims 1-8, wherein said at least one free radical curable component includes a (meth)acrylate functional pentaerythritol derivative.

10. The composition according to claim 9, wherein said pentaerythritol derivative is monohydroxy dipentaerythriol pentaacrylate.

10 11. The composition according to any one of claims 1-10, wherein said at least one free radical curable component includes a (meth)acrylate-functional neopentylglycol derivative.

12. The composition according to any one of claims 1-11, wherein said composition comprises a polyol.

15 13. The composition according to claim 12, wherein said polyol is a polyether polyol.

14. The composition according to claim 12, wherein said polyol is a polyester polyol.

20 15. The composition according to any one of claims 12-14, wherein said hydroxy-functional component has a molecular weight in the range of 200-2500 g/mol.

16. The composition according to any one of claims 1-15, wherein said composition comprises less than 1.5wt%, relative to the total composition, of said at least one photoinitiator.

25 17. The composition according to any one of claims 1-15, wherein said composition comprises less than 0.5wt%, relative to the total composition, of said at least one photoinitiator.

18. The composition according to any one of claims 1-17, wherein said composition comprises, relative to the total weight of said composition, 5-35 wt% of said at least one free radical curable component.

19. The composition according to any one of claims 1-18, wherein said composition comprises, relative to the total weight of said composition, 45-90 wt% of said at least one cationically curable component.

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20. The composition according to any one of claims 1-19, wherein said composition comprises at least 5 wt% of a hydroxy-functional component.

21. The composition according to claim 20, wherein said hydroxy-functional component is
10 absent epoxy groups, oxetane groups, and free radical curable groups.

22. The composition according to any one of claims 1-21, wherein said composition has an E10 number of less than 60 mJ/cm².

15 23. A composition comprising, as pre-mixture ingredients,
(i) at least one free radical curable component; and
(ii) 0.01 to less than 0.50 wt% of a free radical photoinitiator selected from the group consisting of benzophenones.

20 24. A process for forming a three-dimensional object comprising rapid prototyping the composition according to any one of claims 1-23.

25. An article obtainable by the process of claim 24.

25 26. A process for improving the color stability of an article formed at least in part by curing a composition, wherein the process comprises including a photoinitiator selected from the group of benzophenones in the composition prior to cure.

27. The process of claim 26, wherein said composition comprises at least one other
30 photoinitiator not selected from the group consisting of benzophenones.